

## Permit Efficiency Implementation

### “Functionally Equivalent” Construction Materials, Equipment, or Design that Qualifies for Expedited Permit Amendment Review

#### Background

During the 2004 General Assembly, the assembly passed bills that revised the permit fees assessed. These bills required the DEQ to evaluate and implement measures that would improve the long term effectiveness and efficiency of its programs and ensure that maximum value is being achieved from the funding provided. The DEQ contracted ERM to conduct the review in conjunction with three stakeholder groups. Based on this work, the solid waste opportunities list was developed. The second opportunity was to expedite permit review and issuance processes. This document is being developed to specifically address Task 9 under this opportunity, which is to, “Develop list or guidance for applicants and DEQ staff regarding “functionally equivalent” construction materials that qualify for an expedited permit amendment review.”

Existing federal regulations provides the following definition of functionally equivalent and component:

[40 CFR 270.2 \[RCRA\]](#) has the following.

*Functionally equivalent component* means a component [or design] which performs the same function or measurement and which meets or exceeds the performance specifications of another component.

*Component* means any constituent part of a unit or any group of constituent parts of a unit which are assembled to perform a specific function (e.g., a pump seal, pump, kiln liner, kiln thermocouple).

#### Agency Regulations and Practice Review

A review of the existing state solid waste regulation and agency guidance documents produced the following information:

1. Functionally equivalent component is not defined in the current solid waste regulation.
2. The term functionally equivalent is only used in two instances in the current regulation:
  - a. “Equipment replacement or upgrading with functionally equivalent components” (Table 7.2 A.3.)
  - b. Replacement with functionally equivalent equipment, upgrade, or relocate emergency equipment listed (Table 7.2 B.4.b.)
3. Both times that functionally equivalent is used it is considered a minor permitting action in the regulation.
4. The regulation establishes approval of alternate cover for sanitary and industrial landfills (9 VAC 20-80-250.C.2. and 20-80-270.C.12).

5. The regulation establishes a possibility for variances to permitting requirements in Parts V, VI, and VIII provided the alternate design or operation will result in a facility that is equally protective of the human health and the environment as that provided for in the regulations (9 VAC 20-80-750).
6. The regulation also establishes specific petition, demonstration, and decision procedures for variances (9 VAC 20-80-760 to 790) for groundwater protection standards, groundwater monitoring systems, and liner systems.
7. Currently, guidance document number 03-1993 delineates acceptable alternate designs for final cover; however, this document is currently slated for revision.

Based on discussions with staff, the agency has given approvals of functionally equivalent materials, equipment, and designs for the following without going through a complete variance process:

1. HDPE pipe for PVC pipe,
2. HDPE liner material for PVC liner material,
3. Geosynthetic (usually geocomposite) which at least meets the performance standard specified in facility permit for granular drainage material in the cap,
4. Alternate daily cover meeting the required performance standards specified in the regulation given a 180 day trial period (examples include: Posi-shell or other commercial spray applied material, tarps, tire chips with soil amendment, stabilized and dried sludge with soil or ash amendment, CCB ash, CCB ash with soil amendment, non-hazardous contaminated soil, and industrial waste such as foundry sand), and
5. Acceptable alternate final cover designs in accordance with existing agency guidance.

### **Procedure for Submission**

If a facility or company wishes to submit an application to use a functionally equivalent material, equipment, or design which a variance is not required by regulations, it will:

1. Consult DEQ and/or the agency web page to determine if the material, equipment, or design has been approved previously.
2. If previously approved, state this as part of the application and submit any requested performance documentation.
3. If not, submit a list or copies of national testing standards and/or manufacturer data description sheet for the component or equipment. Any information on a similar substitute approved by another state and/or any advantages for increased pollution prevention should also be supplied.

### **Procedure for Review**

When a solid waste permit writer receives an application which requests the use of a functionally equivalent material, equipment, or design which a variance is not required by the regulations, he or she will:

1. Check with the Central Office Solid Waste Permit Coordinator and/or web page posting to see if the material, equipment, or design has been previously approved.

2. If previously approved and performance documents show equivalence, the material, equipment, or design will be deemed acceptable.
3. If not, the permit writer will use the attached checklist to evaluate the request. (Please note, first time approval will require coordination with both the applicant and other agency staff.)

### **Recommendations**

1. The agency needs to develop and maintain a web page site to list functionally equivalent approved materials, equipment, and designs and any performance documents required to be submitted.
2. The agency should add a regulatory definition for functionally equivalent.
3. The agency should revise agency guidance on acceptable alternate final cover designs (guidance number 03-1993) to ensure it is up-to-date.
4. The agency should proceed with regulatory changes to the variance process (Solid Waste Permit Efficiency Opportunity 3.1).
5. The agency should investigate the use of change order/notification rather than minor permit amendments for functionally equivalent change (Solid Waste Permit Efficiency Opportunity 3.2)